Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of

Implementation of Sections 255 and 251(a)(2) of the Communications Act of 1934, as Enacted by the Telecommunications Act of 1996

Access to Telecommunications Service, Telecommunications Equipment and Customer Premises Equipment by Persons with Disabilities

WT Docket No. 96-198

REPORT AND ORDER AND FURTHER NOTICE OF INQUIRY

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By the Commission: Chairman Kennard and Commissioners Ness and Tristani issuing separate statements; Commissioners Furchtgott-Roth and Powell approving in part, dissenting in part and issuing separate statements.

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A. OVERVIEW

1. Introduction

1. In this Report and Order (Order) we adopt rules and policies to implement sections 255 and 251(a)(2) of the Communications Act of 1934, as amended (Act).[1] These provisions, which were added by the Telecommunications Act of 1996 (1996 Act),[2] are the most significant opportunity for the advancement of people with disabilities since the passage of the Americans with Disabilities Act (ADA) in 1990.[3] These provisions require manufacturers of telecommunications equipment and providers of telecommunications services to ensure that such equipment and services are accessible to persons with disabilities, if readily achievable. Congress has recognized that, although we are moving into the information age with increasing dependence on telecommunications tools, people with disabilities remain unable to access many products and services that are vital to full participation in our society. The purpose of sections 255 and 251(a)(2) of the Act is to amend this situation by bringing the benefits of the telecommunications revolution to all Americans, including those who face accessibility barriers to telecommunications products and services. The rules we adopt in this Order will have an historic effect on the ability of Americans with disabilities to access and utilize telecommunications technologies and services.

2. Our nation has an estimated 54 million Americans with disabilities. Persons with disabilities are the largest minority group in the United States, yet despite their numbers, they do not experience equal participation in society. Statistically, most Americans will have a disability, or experience a limitation, at some point in their lives. While only 5.3% of persons 15-24 years of age have some degree of functional limitation, 23% of persons in the 45-54 age range experience functional limitation. The percentage of those affected by functional limitations increases with age: 34.2% of those aged 55-64; 45.4% of those aged 65-69; 55.3% for those aged 70-74; and 72.5% for those aged 75 and older.[4] The number of persons with functional limitations will also increase with time. Today, only about 20% of Americans are over age 55, but by the year 2050, 35% of our population will be over age 55.[5]

3. Congress has responded to this need for access and opportunity for individuals with disabilities by passing landmark legislation in a range of areas: education, employment, tax

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[1] 47 U.S.C. §§ 255, 251(a)(2).

[2] Telecommunications Act of 1996, Pub. L. No.104-104, 110 Stat. 56 (1996).

[3] Americans With Disabilities Act of 1990, Pub. L. No.101-336, 104 Stat.327 (codified in scattered sections of 42 U.S.C.). *See e.g.,* Title III, governing Public Accommodations, 42 U.S.C. § 12181(7) (ADA).

[4] U.S. Department of Commerce, Bureau of the Census, Series P-70, #8; Survey SIPP, 1984.

[5] U.S. Department of Commerce, Bureau of the Census, "Projections of the Population of the United States, by Age, Sex and Race: 1983 to 2080" (*see* years: "1990-2050").

policy, transportation and assistive technology. These laws include the ADA,[6] the Individuals with Disabilities Education Act of 1997,[7] the Assistive Technology Act of 1998,[8] and the Workforce Investment Act of 1998,[9] which amended section 508 of the Rehabilitation Act.[10] Congress has also passed legislation focused specifically on access to communications: Title IV of the ADA (telecommunications relay services)[11] the Telecommunications Accessibility Enhancement Act of 1988,[12] the Hearing Aid Compatibility Act of 1988,[13] and the Television Decoder Circuitry Act of 1990.[14] All of these laws recognize the importance of access to all aspects of society, and access to communications technology in particular.

4. Through the 1996 Act, Congress recognized the importance of access to telecommunications for all people. Telecommunications has become such a common tool that its use is essential for participation in nearly all aspects of our society. Today, most Americans rely on telecommunications for routine daily activities, such as making doctors' appointments, calling home when they are late for dinner, participate in conference calls at work, and making airline reservations. Moreover, diverse telecommunications tools such as distance learning, telemedicine, telecommuting and video conferencing enable Americans to interface anytime from anywhere. Understanding that communications is now an essential component of American life, Congress intended the 1996 Act to provide people with disabilities access to employment, independence, emergency services, education, and other opportunities.

5. More specifically, telecommunications is a critical tool for employment. If telecommunications technologies are not accessible to and usable by persons with disabilities, many qualified individuals will not be able to work or achieve their full potential in the workplace. Congress recognized the importance of creating employment opportunities for people with disabilities with Title I of the ADA,[15] which addresses the employer's

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[6] 42 U.S.C. § 12101 *et seq.*

[7] Pub. L. 105-17, June 4, 1997, 11 Stat. 37, *codified in* 20 U.S.C. § 1401 *et seq.*

[8] Pub. L. 105-394, Nov. 13, 1998, 112 Stat. 3627, *codified in* 29 U.S.C. § 3001 *et seq.*

[9] Pub. L. 105-220, Aug. 7, 1998, 112 Stat. 936, *codified in* 29 U.S.C. § 2801 *et seq.*

[10] 29 U.S.C. § 798.

[11] 47 U.S.C. § 225.

[12] Pub. L. 100-542, Oct. 28, 1988, 102 Stat. 2721, *codified at* 40 U.S.C. § 762.

[13] Pub. L. 100-394, Aug. 16, 1988, 102 Stat. 976, *codified at* 47 U.S.C. § 610.

[14] Pub. L. 101-431, Oct. 15, 1990, 104 Stat. 961, *codified in* 47 U.S.C. §§ 303(a), 330(b).

[15] 42 U.S.C. § 12131 *et seq.*

responsibilities in making the workplace accessible to employees with disabilities. As noted by UCPA, when essential job functions require the ability to use and operate devices and services, people with disabilities are at a disadvantage when these devices and services have not been designed with accessibility in mind.[16] Unemployment among people with severe disabilities is roughly 73%, at a time when our country is experiencing the lowest unemployment rate in years. Persons with disabilities who are employed earn on average only one-third the income of the non-disabled population.[17] The rules we adopt today complement Title I of the ADA by giving employers expanded tools with which to employ and accommodate persons with disabilities.

6. Access to telecommunications can also bring independence. The disability community has told the Commission of the frustration of not being able to check the balance of a checking account using telecommunications relay service, or not being able to tell if a wireless phone is turned on, or not being able to use a calling card because of inadequate time to enter the appropriate numbers. The rules adopted in this Order may be essential in bringing a great measure of independence to members of the disability community. Access to telecommunications services also plays a critical role in life-threatening emergencies. The Commission has received numerous reports from relatives of senior citizens saying that their elderly parents could live on their own, if only they had telecommunications equipment that they could use.

7. The benefits of increased accessibility to telecommunications are not limited to people with disabilities. Just as people without disabilities benefit from the universal design principles of the ADA and the Architectural Barriers Act (for example, a parent pushing a stroller over a curb cut), many people without disabilities will also benefit from accessible telecommunications equipment and services. Indeed, many of us already benefit from accessibility features in telecommunications today: vibrating pagers do not disrupt meetings; speaker phones enable us to use our hands for other activities; and increased volume control on public payphones allows us to talk in noisy environments. We expect many similar results from the rules we adopt today. More importantly, we all benefit when people with disabilities become active in our communities and in society as a whole. Congress clearly intended that these provisions would make a real difference in the lives of people with disabilities, and of all Americans. As the Senate stated in its report on these accessibility provisions:

> The Committee recognizes the importance of access to communications for all Americans. The Committee hopes that this requirement will foster the design, development, and inclusion of new features in communications technologies that permit more ready accessibility of communications technology by individuals with disabilities. The Committee also regards this

[16] *See* UCPA comments, attachment, p. 3.

[17] National Organization on Disability and Louis Harris and Associates, "Survey of Americans with Disabilities," July 23, 1998.

new section as preparation for the future given that a growing number of Americans have disabilities.[18]

2. Background

8. Congress set forth a comprehensive framework to achieve accessibility in sections 255 and 251(a)(2). In particular:

- Section 255(a) defines the terms "disability" and "readily achievable" to have the same meaning as set forth in the ADA.[19]
- Section 255(b) requires a manufacturer of telecommunications equipment or customer premises equipment (CPE) to ensure that the equipment is designed, developed, and fabricated to be accessible to and usable by individuals with disabilities, if readily achievable.[20]
- Section 255(c) requires a provider of telecommunications service to ensure that the service is accessible to and usable by individuals with disabilities, if readily achievable.[21]
- Whenever the accessibility requirements of sections 255(b) and 255(c) are not readily achievable, section 255(d) requires manufacturers and service providers to ensure compatibility with existing peripheral devices or specialized CPE commonly used by individuals with disabilities to achieve access, if readily achievable.[22]
- Section 251(a)(2) provides that each telecommunications carrier has the duty not to install network features, functions, or capabilities that do not comply with the guidelines and standards established pursuant to section 255 or 256.[23]
- Section 255(f) states that nothing in this section shall be construed to authorize any private right of action to enforce any requirement of this section or any regulation thereunder. The Commission shall have exclusive jurisdiction with

[18] S. Rep. No. 104-23, 104th Cong., 1st Sess. 52 (1995), as quoted in NAD comments at 10.

[19] 47 U.S.C. § 255(a).

[20] 47 U.S.C. § 255(b).

[21] 47 U.S.C. § 255(c).

[22] 47 U.S.C. § 255(d).

[23] 47 U.S.C. § 251(a)(2).

respect to any complaint under this section.[24]

- Section 255(e) states that within 18 months after the date of enactment of the Telecommunications Act of 1996, the Architectural and Transportation Barriers Compliance Board (Access Board) shall develop guidelines for accessibility of telecommunications equipment and customer premises equipment in conjunction with the Commission. The Board shall review and update the guidelines periodically.[25]

9. To implement its obligations pursuant to section 255(e), the Access Board convened the Telecommunications Access Advisory Committee (TAAC)[26] to develop recommended equipment accessibility guidelines for consideration by the Access Board. The TAAC included representatives from equipment manufacturers, software firms, telecommunications providers, organizations representing persons with disabilities, and other persons interested in telecommunications accessibility. The TAAC released its Final Report in January 1997.[27]

10. Thereafter, the Access Board adopted the Telecommunications Act Accessibility Guidelines (the guidelines) for equipment in its Order (Access Board Order),[28] drawing heavily on the *TAAC Report* recommendations. The guidelines consist of: (1) general accessibility requirements; (2) specific guidance on the ways in which the functions necessary to operate a product should be made accessible if readily achievable;[29] and (3) standards for

[24] 47 U.S.C. § 255(f).

[25] 47 U.S.C. § 255(e). The Access Board is an independent Federal agency whose primary mission is to increase access for persons with disabilities. In addition to its duties under the Act, the Access Board: (1) develops minimum guidelines and requirements for standards issued under the ADA and the Architectural Barriers Act; (2) enforces the Architectural Barriers Act; and (3) develops accessibility standards for electronic and information standards under section 508 of the Rehabilitation Act.

[26] *See* Access Board, Telecommunications Act Accessibility Guidelines for Telecommunications Equipment and Customer Premises Equipment, Notice of Appointment of Advisory Committee Members and Notice of First Meeting, 61 Fed. Reg. 13813 (Mar. 28, 1996).

[27] Telecommunications Access Advisory Committee, Access to Telecommunications Equipment and Customer Premises Equipment by Individuals with Disabilities, Final Report, Jan. 1997 (*TAAC Report*).

[28] 36 C.F.R. Part 1163.

[29] The Access Board Guidelines organize these product functions into the two general categories of (1) input related functions and (2) output related functions. For each category the Access Board lists the kinds of accessibility solutions that should be evaluated, such as the ability to be operated without vision and the ability to provide auditory information in visual form.

compatibility with peripheral devices and specialized CPE.[30] The *Access Board Order* also contains an Appendix which is advisory in nature and provides expanded descriptions of the guidelines, offering suggestions of strategies to assist in achieving accessible design.

11. In April 1998, the Commission issued a *Notice of Proposed Rulemaking* (*NPRM*), building in part from a the Access Board guidelines and in part from a *Notice of Inquiry* it adopted in September 1996.[31] In the *NPRM*, the Commission made tentative conclusions about the scope of the Act's coverage, the definition of the term "readily achievable," and other key matters. Over two hundred individuals, organizations, and businesses filed comments and reply comments in response to the *NPRM*.[32] This Order is a final step in the development and adoption of the rules to implement section 255.

3. Summary

12. A summary of the decisions in this Order is provided below:

- We adopt rules identical to or based upon the Access Board guidelines, with a few minor exceptions.[33]
- We require manufacturers and service providers to develop a process to evaluate the accessibility, usability, and compatibility of covered services and equipment.[34]
- We require manufacturers and service providers to ensure that information and documentation provided to customers is accessible to customers with disabilities, if readily achievable. Where manufacturers and service providers furnish employee training, such training programs must consider certain factors

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[30] Architectural and Transportation Barriers Compliance Board, *Telecommunications Act Accessibility Guidelines*, 36 C.F.R. Part 1193, 63 Fed. Reg. 5608-41 (1998) (*Access Board Order*).

[31] *Implementation of Section 255 of the Telecommunications Act of 1996; Access to Telecommunications Service, Telecommunications Equipment, and Customer Premises Equipment by Persons with Disabilities*, Notice of Proposed Rulemaking, WT Docket No. 96-198, 13 FCC Rcd 20391 (1998) (*NPRM*); *Implementation of Section 255 of the Telecommunications Act of 1996; Access to Telecommunications Service, Telecommunications Equipment, and Customer Premises Equipment by Persons with Disabilities*, Notice of Inquiry, WT Docket No. 96-198, 11 FCC Rcd 19152 (1996).

[32] *See* list of commenters and reply commenters in Appendix C, *infra*.

[33] *See* section A.4, *infra*.

[34] *See* section B.3, *infra*.

relating to accessibility requirements.[35]

- With minor changes, we adopt the Access Board definition of the term "accessibility," incorporating the list of ways in which the functions of a product should be made accessible. We also apply this definition to both equipment and services.[36]

- Consistent with the Access Board definition, we define the term "usability" as access to the full functionality of, and documentation for, the product or service, including instructions, billing, product or service information (including accessible feature information), documentation, and technical support functionality.[37]

- We adopt four of the Access Board's five criteria for determining "compatibility." We do not include the criterion of compatibility with prosthetic devices, but instead include that criterion in our definition of "accessibility."[38]

- Consistent with the ADA, we define the term "readily achievable" as easily accomplishable and able to be carried out without much difficulty or expense. Determinations as to what is "readily achievable" will be made on a case-by-case basis considering factors which include: (1) the cost of the action; (2) the nature of the action; and (3) the overall resources available to the entity.[39]

- We determine that section 255, by its terms, applies to the design and production of each individual product and service offered by a manufacturer or service provider. The obligation of a manufacturer or service provider to review the accessibility of a product or service, and incorporate accessibility features, where readily achievable, must occur at every natural opportunity.[40]

- We require the universal deployment of accessibility features that can be incorporated into product design when readily achievable. For those features or actions that cannot be universally deployed, but are readily achievable to incorporate into some products and services, manufacturers and service

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[35] *See* section B.3, *infra.*

[36] *See* section B.3, *infra.*

[37] *See* section B.3, *infra.*

[38] *See* section B.4, *infra.*

[39] *See* section C, *infra.*

[40] *See* sections C.2, C.3, *infra.*

providers have the flexibility to distribute those features across their products or services as long as they do all that is readily achievable.[41]

- We determine that, pursuant to section 251(a)(2), a telecommunications carrier may not install network features, functions, or capabilities that do not comply with the accessibility requirements of this Order.[42]
- We determine that the terms "telecommunications" and "telecommunications services" have the meanings set forth in section 3 of the Act.[43]
- We determine that the terms "telecommunications equipment" and "customer premises equipment" have the meanings set forth in section 3 of the Act, and include software integral to the equipment's operation.[44]
- We determine that the term "manufacturer" means an entity that makes or produces a product, including any entity that exercises significant control over the design, development or fabrication process.[45]
- In order to ensure the accessibility of telecommunications services, we assert ancillary jurisdiction to extend the accessibility requirements of this Order to providers of voicemail and interactive menu service, as well as to manufacturers of equipment which performs those functions.[46]
- We adopt an informal complaint procedure in which manufacturers and service providers must attempt to resolve the customer's concerns and respond to the Commission within 30 days. Manufacturers or service providers are not required, as an initial response to each complaint, to supply a detailed analysis of what is and is not readily achievable to accomplish. The Commission may, based on a single complaint or a trend or pattern of practices, initiate inquiries or investigations to determine if a manufacturer is fulfilling its section 255 obligations.[47]

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[41] *See* section C.2.a, *infra.*

[42] *See* section B.5, *infra.*

[43] *See* section D.1.a, *infra.*

[44] *See* section D.1.b, *infra.*

[45] *See* section D.2, *infra.*

[46] *See* section D.3, *infra.*

[47] *See* sections E.1, E.2, *infra.*

- We encourage, but do not require, consumers to contact the covered entity in advance of filing an informal complaint with the Commission. We allow complainants to file a formal complaint for adjudication of a dispute at any time.[48]

4. Authority to Promulgate Rules

13. In the *NPRM*, we tentatively concluded that we had authority to adopt regulations implementing section 255 pursuant to section 4(i), 201(b), and 303(r).[49] As supported by the record, we conclude that we have authority to adopt regulations to implement section 255.[50] We find that the language of section 255(f), which bars any private right of action "to enforce any requirement of this section *or any regulation thereunder*," expressly contemplates the Commission's enactment of regulations to carry out its enforcement obligations under the provisions of section 255.[51] Furthermore, in a case challenging the Commission's authority to adopt rules pursuant to another provision of the 1996 Act, the Supreme Court held "that [section] 201(b) explicitly gives the FCC jurisdiction to make rules governing matters to which the 1996 Act applies."[52] In other words, an individual provision of the Communications Act need not contain an express grant of rulemaking authority in order to empower the Commission to adopt implementing regulations. For these reasons, we reject the arguments of some parties that Congress' deletion of Senate bill language requiring the Commission to promulgate rules to implement section 255 should be construed as limiting the Commission's discretionary rulemaking power.[53] We conclude, therefore, that at a minimum, section 255 itself grants us authority to enact rules to implement the provisions of section 255.[54] In addition, most commenters supported exercising this authority because covered

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[48] *See* section E.3, *infra.*

[49] *NPRM*, 13 FCC Rcd at 20400, ¶ 26. Specifically, we found that it is well established that an agency has the authority to adopt rules to administer congressionally-mandated requirements. We stated that nothing in section 255 bars the Commission from exercising the rulemaking authority granted in sections 4(i), 201(b), and 303(r) to clarify and implement the requirements of section 255.

[50] *See* Lucent comments at 3; NAD comments at 2; OKDRS comments at 1; PCIA comments at 6-7; TDI comments at 5. *But see* BSA comments at 15-16; CEMA comments at 5 (citing section 255(e) as justification for adopting the Access Board's guidelines rather than issuing additional rules); Siemens comments at 3 (although the Commission has sufficient authority to promulgate rules pursuant to section 255, rules would be too rigid and constrain innovation).

[51] *See* 47 U.S.C. § 255(f); *see also NPRM*, 13 FCC Rcd at 20403-05.

[52] *AT&T Corp. v. Iowa Util. Bd.*, 119 S.Ct. 721, 730 (1999).

[53] *See* comments filed in response to the *Notice of Inquiry;* CEMA comments at 13; ITI comments at 7; SWBT comments at 2. *See also Notice of Inquiry*, 11 FCC Rcd at 19163, ¶ 29 (citing S. 652, 104th Cong., 1st Sess., 262(g)).

[54] *See, e.g.*, USA comments at 14-15.

entities would benefit from having rules that provide clear guidance in fulfilling their section 255 obligations.[55]

14. The extensive record herein supports the adoption of rules consistent with the Access Board's guidelines.[56] Accordingly, we adopt rules in this Order that are identical to or based upon the Access Board guidelines, with a few minor exceptions.[57] Moreover, as explained below, because the Access Board guidelines, though directed to equipment, are sufficiently broad in their language, we conclude below that they can effectively serve as the basis for rules for both covered services and equipment. Therefore, we apply our rules uniformly to both covered services, as well as covered equipment.

15. We note, however, that we have the discretion to depart from the Access Board guidelines where merited. Most commenters did not question our discretion to depart from the Access Board guidelines,[58] although some urged us to use our discretion to adopt the guidelines wholesale and apply them to services.[59] In addition, some commenters felt that we should depart from the guidelines only under special circumstances.[60] While we acknowledge the Access Board's expertise in identifying the access requirements of persons with disabilities in a comprehensive manner, we find that the Commission would not be bound to adopt the Access Board's guidelines as its own, or to use them as minimum standards, if it were to conclude, after notice and comment, that such guidelines were inappropriate.[61] Typically,

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[55] *See, e.g.*, ACB comments at 2; Ameritech comments at 6-7; CCIA comments at 2; NCD comments at 2; SHHH comments at 2-3; USA comments at 14-15 Trace comments at 2.

[56] *See, e.g.*, ACB comments at 2-3; CPB/WGBH comments at 3; IDHS comments at 2; WID comments at 2; Access Board comments at 1-2; NAD comments at 4; NCD comments at 2; SHHH comments at 3-5; TDI comments at 6; USA comments at 4-5; WI-TAN comments at 2.

[57] For example, we have declined to adopt the Access Board's volume control standard because it directly contradicts existing Commission rules at 47 C.F.R. § 68.317. *See* ¶ 25, *infra.* In addition, we recognize the need to relocate "accessible with prosthetics" from a compatibility criterion to one of accessibility. *See* ¶ 27, *infra.*

[58] Bell Atlantic comments at 3; BSA comments at 13-14; CEMA comments at 7; Lucent comments at 3; Siemens comments at 3-4; Trace comments at 2.

[59] IDHS comments at 1; NAD comments at 4; NCD comments at 2; USA comments at 4-5; UCPA comments at 2; WI-TAN comments at 2; CTA comments at 9; OkATP comments at 1-2.

[60] *See, e.g.*, Access Board comments at 3 (departures from the guidelines which provide less accessibility would result in FCC actions which are inconsistent); AFB comments at 4-5 (Commission must show substantial basis for departing from the guidelines based on the record).

[61] The language and legislative history of section 255 are not particularly instructive about the role Congress intended for the Board's guidelines. Although Senate Bill S.652, on which the final legislation is modeled, had indicated that the Commission regulations should be consistent with the standards developed by the Access Board, this language was omitted without explanation from the final legislation. In view of the non-binding nature of guidelines, this deletion stripped the guidelines of their status as binding standards.

unless otherwise provided by statute, "guidelines" are distinct from rules and, like a general statement of policy or procedure, are not considered to have the force and effect of law.[62] Because section 255(e) requires that the Commission participate in the Access Board's formulation of guidelines, however, we believe that Congress intended that such guidelines be given significant consideration in implementing section 255. The fact that Congress mandated the Board's continuing involvement through periodic review and updating of guidelines under section 255(e) further supports our decision to give significant consideration to the Board's guidelines, as we have done throughout our deliberations. We also recognize that these guidelines are the product of extensive deliberations between the disability community and the telecommunications industry, which gives them considerable credibility in our view.

B. REQUIREMENTS FOR COVERED ENTITIES

1. Overview

16. The requirements that covered entities (as discussed in section D, *infra*) must follow are outlined below. First, as stated in the statute, a manufacturer of telecommunications equipment or customer premises equipment shall ensure that the equipment is designed, developed, and fabricated to be accessible to and usable by individuals with disabilities, if readily achievable. Second, a provider of telecommunications service shall ensure that the service is accessible to and usable by individuals with disabilities, if readily achievable. Finally, whenever the requirements set forth above are not readily achievable, such a manufacturer or provider shall ensure that the equipment or service is compatible with existing peripheral devices or specialized customer premises equipment commonly used by individuals with disabilities to achieve access, if readily achievable.

17. To implement these statutory requirements, we must consider and interpret the key terms used in section 255, including "disability," "accessible to and usable by," "compatibility," and "readily achievable." The meanings of these terms are critical to the obligations of entities covered by section 255.

2. Disability

18. Section 255 provides that the term "disability" has the meaning given to it by section 3(2)(A) of the Americans with Disabilities Act (ADA).[63] The ADA defines "disability" as "(1) a physical or mental impairment that substantially limits one or more of the major life activities of an individual; (2) having a record of such an impairment; or (3) being regarded as having such an impairment."[64] Without expressly defining disability, the

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[62] *See* 5 U.S. C. 553(b)(3)(A); *see also Aulenback, Inc. v. Federal Highway Admin.*, 103 F.3d 156, 168-69 (D.C. Cir. 1997); *Telecommunications Research and Action Center v. FCC*, 800 F.2d 1181 (D.C. Cir. 1986).

[63] 47 U.S.C. § 255(a)(1), *citing* 42 U.S.C. § 12102(2)(A).

[64] 42 U.S.C. § 12102(2)(A).

Access Board explained that its "guidelines are required to principally address the access needs of individuals with disabilities affecting hearing, vision, movement, manipulation, speech, and interpretation of information."[65]

19. We adopt the ADA definition of disability in its entirety, as required under Section 255 of the Act. Indeed, the statutory language requires that we apply the same definition as set forth in the ADA. We further agree with commenters that, in implementing section 255, we should follow any applicable judicial and administrative precedent stemming from this definition, except in those limited circumstances in which such precedent is shown to be unsuitable to a specific factual situation.[66] We disagree with TIA that the definition of disability should be limited to include "only those persons with functional limitations that affect their ability to use telecommunications equipment and CPE."[67] TIA's proposal would effectively limit the definition of "disability" to the first prong of the ADA definition, because such a definition would not reach persons with a record of an impairment or persons who are "regarded as" having disabilities. We decline to depart from or alter the ADA definition, where Congress expressly incorporated the ADA definition of disability in its entirety.

20. In order to provide an additional measure of guidance to manufacturers and service providers, and consistent with the Access Board, we conclude further that, at a minimum, the statutory reference to "individuals with disabilities" includes those with hearing, vision, movement, manipulative, speech, and cognitive disabilities.[68] We agree that individuals with these disabilities experience the great majority of access barriers that section 255 was intended to address. By no means, however, is the definition of "disability" limited to these specific groups. Determinations of what constitutes a "disability" under section 255 must be made on a case-by-case basis.

3. "Accessible To and Usable By"

21. Section 255 requires equipment manufacturers to ensure that their equipment is designed, developed and fabricated to be "accessible to and usable by" individuals with disabilities, if readily achievable, and requires service providers to ensure that the service is "accessible to and usable by" individuals with disabilities, if readily achievable. The terms "accessible to" and "usable by" are not defined in either section 255 or the ADA.

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[65] *Access Board Order*, 63 Fed. Reg. 5608. By way of example, traditional voice telephone service may not be accessible to people with vision disabilities because dialing is obstructed and visually displayed information is inaccessible, and people with cognitive disabilities may be unable to interact with short-delay automated answering services.

[66] *See, e.g.,* Air Touch comments at 2; AT&T comments at 7; NAD comments at 20; Oklahoma DRS comments at 1; SHHH comments at 9; TDI comments at 12; AIM comments at 1; AFB comments at 20.

[67] TIA comments at 20.

[68] *Access Board Order*, 63 Fed. Reg. 5608. NAD comments at 20; SHHH comments at 9; TDI comments at 12; AFB comments at 20.

22. The Access Board adopted a functional approach, defining equipment "accessible to" individuals with disabilities as including various input, control and mechanical functions, as well as output, display and control functions.[69] The Access Board guidelines for equipment define "usable by" as meaning that "individuals with disabilities have access to the full functionality and documentation for the product, including instructions, product information (including accessible feature information), documentation, and technical support functionally equivalent to that provided to individuals without disabilities."[70] The Access Board states that the "usable by" requirement is intended "to convey the important point that products which have been designed to be accessible are usable only if an individual has adequate information on how to operate the product."[71] In addition, section 1193.37 of the Access Board's rules calls for pass-through of "cross-manufacturer, non-proprietary, industry-standard codes, translation protocols, formats or other information necessary to provide telecommunications in an accessible format," in order to ensure, among other things, that signal compression technologies do not remove information needed for access, or restore it upon decompression.[72]

23. We adopt the Access Board's definitions of "accessible to" and "usable by." We

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[69] The Access Board's input, control and mechanical functions at 36 C.F.R. § 1193.41 are:

- Operable without vision
- Operable with low vision and limited or no hearing
- Operable with little or no color perception
- Operable without hearing
- Operable with limited manual dexterity
- Operable with limited reach or strength
- Operable without time-dependent controls
- Operable without speech
- Operable with limited cognitive skills

The output, display and control functions listed by the Access Board at 36 C.F.R. § 1193.43 are:

- Availability of visual information
- Availability of visual information for low vision users
- Access to moving text
- Availability of auditory information
- Availability of auditory information for people who are hard of hearing
- Prevention of visually-induced seizures
- Availability of auditory cutoff
- Non-interference with hearing technologies
- Hearing aid coupling

[70] 36 C.F.R. § 1193.3.

[71] *Access Board Order*, 63 Fed. Reg. 5616.

[72] 36 C.F.R. § 1193.37.

initially proposed in the *NPRM* to combine these terms under one definition under our rules, reasoning that the term "accessible to" should be used in its broadest sense to refer to the ability of persons with disabilities actually to *use* the equipment or service by virtue of its inherent capabilities and functions.[73] Upon further review, however, we believe that it is more precise, and will provide clearer guidance to entities covered by section 255, for us to follow the lead of the Access Board and define these two terms separately because the requirements of "accessible to" and "usable by" embrace two distinct concepts.[74] While "accessible to" generally refers to the incorporation of specific features in products and services that will allow people with disabilities to access those products, we agree with the Access Board that "usable by" generally refers to the ability of people with disabilities to learn about and operate those features effectively.[75] Although the Access Board guidelines were designed in the context of equipment and CPE accessibility, we conclude that these guidelines are equally applicable to the services context, and thus our definition of accessibility and usable applies to both equipment and services. We also adopt the proposal made in the *NPRM* to ensure that support services (such as consumer information and documentation) associated with equipment and services are accessible to and usable by people with disabilities.[76]

24. We conclude that, with one technical exception[77] and one addition,[78] the input, control and mechanical functions in section 1193.41 of the Access Board guidelines and the output, display and control functions in section 1193.43 of the Access Board guidelines shall constitute the definition of "accessible to" under the Commission's rules. We disagree with Phillips and TIA that adoption of the Access Board list as part of our definition of "accessible

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[73] *NPRM*, 13 FCC Rcd at 20427-28, ¶ 75. Several commenters recognize that both accessibility and usability are necessary factors in enabling a person with disabilities to use telecommunications services and equipment, but did not advocate distinguishing between them. AIM comments at 1; Bell South comments at 7; NC Assistive Technology comments at 1; Trace comments at 6. SBC interprets "accessible to and usable by" to impose a single obligation to ensure that a person with disabilities may actually use a telecommunications service or piece of equipment, and that functional use generally will require accessible support services such as product information and instructions. SBC comments at 6. TIA was less concerned over whether the definitions were separate or if usability was incorporated into accessibility, as long as it is clear that accessible product information and customer support are essential and required by section 255 if readily achievable. TIA reply comments at 18-19.

[74] NAD disagrees with the combination of accessibility and usability, arguing that the requirements of usability are quite distinct from those needed to achieve accessibility. NAD comments at 6. SHHH argues that it is important to preserve the nuances of "usability" and "accessibility," and therefore opposes the combination of the terms. SHHH comments at 10-11. TDI argues that each term has an independent objective and should be treated as such, and the Commission should maintain the distinction between the two terms as presented by the Access Board guidelines. TDI comments at 12-13. *See also* UCPA comments at 7.

[75] *See Access Board Order*, 63 Fed. Reg. at 5616.

[76] *NPRM*, 13 FCC Rcd at 20428, ¶ 76.

[77] *See infra* ¶ 25.

[78] *See* ¶ 26, *infra*.

to" could be read as requiring manufacturers to incorporate all 18 functions into each product, and thus would require manufacturers to "attempt the impossible."[79] Phillips' and TIA's argument ignores the fact that all assessments of a product's or service's accessibility, and decisions regarding which of the 18 areas on the list can be addressed, must be made within the boundaries of the readily achievable qualification of the statute. The list is not a set of mandates, but rather a list of areas covered entities should be considering when designing products and services. For this reason, we agree with commenters that the definition is fair and appropriately descriptive.[80]

25. We do not adopt section 1193.43(e) of the Access Board rules, which would require that volume control telephones provide a minimum of 20 dB adjustable volume gain. We decline to adopt this 20 dB volume control standard under our rules because it conflicts with rules that we have previously adopted pursuant to the Hearing Aid Compatibility Act.[81] While we recognize the rationale behind Access Board's decision to provide a more stringent volume control standard, we decline to supersede existing Commission rules developed under a lengthy negotiated rulemaking pursuant to a section of the Act focused expressly on this issue. Furthermore, because the industry has, since 1997, been making plans to incorporate our HAC Act volume control requirements in all telephones to be manufactured in, or imported for use in, the United States after January 1, 2000, it would be unduly disruptive and burdensome for us to alter the volume control technical standards at this time.

26. We also do not adopt a separate requirement regarding net reductions similar to that in section 1193.30 of the Access Board's guidelines. We believe that this requirement is addressed under the readily achievable definition and analysis. As we noted in the *NPRM*, the fact that a product has particular accessibility features is evidence that inclusion of those features in later products from the same producer is readily achievable.[82] The flexibility of the readily achievable analysis recognizes that it will generally be unacceptable to completely eliminate an existing accessibility feature, but that legitimate feature trade-offs as products evolve are not prohibited.

27. We do, however, add to our rules one input factor to the list developed by the Access Board. Specifically, the definition of "accessible to" shall include being "operable with prosthetic devices." The Access Board's guidelines under section 255(d) for

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[79] Phillips comments at 9; TIA comments at 31.

[80] *See, e.g.,* AIM comments at 1; AT&T comments at 7; LDA comments at 1; NAD comments at 6-7; NCD comments at 17; SHHH comments at 11; TDI comments at 13.

[81] 47 U.S.C. § 610. Under section 68.6 of the Commission's volume control rules, 47 C.F.R. 68.6, all wireline telephones (including cordless telephones) manufactured or imported for use in the United States as of January 1, 2000 must have a volume control feature in accordance with detailed technical specifications at 47 C.F.R. 68.317. In general, these technical specifications require analog and digital telephones to provide between 12-18 dB of volume gain. *See* 47 C.F.R. § 68.317.

[82] *NPRM*, 13 FCC Rcd at 20443, ¶ 114.

compatibility included "compatibility of controls with prosthetics" as one criterion.[83] We agree with Trace, however, that prosthetic devices should not be considered peripheral devices subject to the compatibility requirements of section 255(d), but rather that manufacturers and service providers should be required to consider direct access to input controls by persons using prosthetic devices as part of their "accessibility" obligations under sections 255(b) and (c).[84] Because some people with disabilities rely on prosthetic devices, we conclude that consideration of direct access by such persons is appropriately encompassed in the definition of "accessible to.[85]

28. We adopt the Access Board's definition of "usable by" as our definition under the rules. As many commenters that addressed this issue recognized, providing access to all supporting documentation and support services is an essential ingredient for the successful implementation of section 255 and is encompassed by our definition of "usable by."[86] Support services include, but are not limited to, access to technical support hotlines and databases, access to repair services, billing and any other services offered by a manufacturer or service provider that facilitate the continued and complete use of a product or service. Support services also include efforts by manufacturers and service providers to educate its sales force about the accessibility of their products and how accessibility features can be used.

29. We further conclude, consistent with the Access Board's guidelines and supported by the record, that "usable by" means manufacturers and service providers ensure that consumers with disabilities are included in product research projects, focus groups, and product trials, where applicable, to further enhance the accessibility and usability of a product, if readily achievable.[87] Consumers with disabilities, even if they can access the functionalities of a specific product, may still face significant barriers in the use of telecommunications equipment and services. We believe that Congress, through its inclusion of the words "usable by," intended that consumers with disabilities should be able to use telecommunications equipment and services on terms equal to those of any other customer, and that participation in the activities described above is an important step towards reaching this goal.

30. We also conclude, consistent with the Access Board guidelines and the statutory

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[83] 36 C.F.R. 1193.51(c).

[84] Trace comments at 5, 14.

[85] Trace comments at 5-6.

[86] *See, e.g.,* AccLiv comments at 2; ACB comments at 3; NAD comments at 5-6; SHHH comments at 10; California PUC comments at 7-8; WID comments at 2-3.

[87] *See* Appendix B, sections 6.13 and 7.13. *See also* AccLiv comments at 2-3; ACB comments at 3-4 ; CPB/WGBH comments at 3-5; IDHS comments at 2-3; LDA comments at 1-2; PCEPD comments at 8-9; LICIL comments at 2-3; WID comments at 2-3; CILNM comments at 1-3 ; Lake Co. comments 1-2; SIL comments at 2-3; AFB comments at n. 4; WI-TAN comments at 2-3.

definition of CPE, that specialized CPE, such as direct-connect TTYs,[88] are considered a subset of CPE. The statute's requirement that manufacturers and service providers ensure compatibility with CPE which has a specialized use does not change the fact that this equipment still meets the definition of CPE as discussed *infra* in paragraphs 80 *et. seq.* We define specialized CPE as CPE which is commonly used by individuals with disabilities to achieve access.[89] Thus, manufacturers and service providers have the same obligations to ensure accessibility and usability of SCPE as they do for any other CPE.[90]

4. Compatibility

31. Section 255 requires that, when it is not readily achievable to make equipment and services accessible to or usable by individuals with disabilities, the manufacturer or service provider shall ensure that the equipment or service is "compatible with existing peripheral devices or specialized customer premises equipment commonly used by individuals with disabilities to achieve access, where readily achievable."[91]

32. The Access Board defines "peripheral devices" as "[d]evices employed in connection with telecommunications equipment or customer premises equipment to translate, enhance, or otherwise transform telecommunications into a form accessible to individuals with disabilities."[92] It further explains that "peripheral devices" refers to, for example, audio amplifiers, ring signal lights, some TTYs, refreshable Braille translators, text-to-speech synthesizers and similar devices that must be connected to a telephone or other customer premises equipment to enable an individual with a disability to originate, route, or terminate telecommunications. The Access Board also states that peripheral devices cannot perform these functions on their own.[93] The Access Board defines "specialized customer premises equipment" (SCPE) as "[e]quipment, employed on the premises of a person (other than a carrier) to originate, route, or terminate telecommunications, which is commonly used by

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[88] A TTY is a piece of equipment that employs interactive text-based communications through the transmission of coded signals across the standard telephone network.

[89] 63 Fed. Reg. 5615-16 (1998).

[90] Of course, as the Access Board notes, "the provisions for accessibility and compatibility are required only when the feature or function is provided. For example, the requirement to provide a visual output applies only where an auditory output is provided. Thus, if a product provides no auditory output for its operation, a corresponding visual output is not required." *Access Board Order*, 63 Fed. Reg. 5616 (1998).

[91] 47 U.S.C. § 255(d).

[92] 36 C.F.R. § 1193.3.

[93] *Access Board Order*, 63 Fed. Reg. 5613.

individuals with disabilities to achieve access."[94] The Access Board guidelines categorize specialized CPE as a subset of CPE and state that manufacturers of specialized CPE should also make their products accessible to all individuals with disabilities, where readily achievable.[95] Finally, the Access Board lists five criteria for determining compatibility: (1) external access to all information and control mechanisms; (2) existence of a connection point for external audio processing devices; (3) compatibility of controls with prosthetics; (4) TTY connectability; and (5) TTY signal compatibility.[96]

33. As proposed in the *NPRM*,[97] and supported by the record,[98] we will use the Access Board compatibility criteria as our starting point. We adopt four of the five criteria set forth by the Access Board as the definition of "compatibility" under section 255. We do not adopt the criterion of "compatibility of controls with prosthetic devices," which we have instead added to the definition of accessibility.[99]

34. Furthermore, we agree with commenters that we should adopt the Access Board's definitions of "peripheral devices" and "specialized CPE."[100] As proposed in the *NPRM*,[101] the definitions of the terms "peripheral devices" and "specialized CPE" limit the compatibility requirement to those devices that have a specific telecommunications function or are designed to be used primarily to achieve access to telecommunications. Thus, for example, equipment used in direct conjunction with CPE, such as amplifiers for persons with hearing disabilities, or screen readers for persons with visual disabilities, would be considered either peripheral devices or specialized CPE. In contrast, assistive technology devices such as hearing aids or eyeglasses, which have a broad application outside the telecommunications context, used in conjunction with peripheral equipment or specialized CPE, would not themselves be

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[94] *Id.*

[95] *Id.* at 5616.

[96] 36 C.F.R. § 1193.51.

[97] *NPRM*, 13 FCC Rcd at 20434, ¶ 92.

[98] AccLiv comments at 3; CPB/WGBH comments at 5; Illinois Deaf and Hard of Hearing Commission comments at 3; NAD comments at 7-8; SHHH comments at 12; TDI comments at 17.

[99] *See* ¶¶ 25-27, *supra.*

[100] Also, as discussed in ¶ 30, *supra*, we have concluded that "specialized CPE" is a subset of CPE and thus subject to the "accessible to" and "usable by" requirements of the statute.

[101] *NPRM*, 13 FCC Rcd at 20433, ¶ 90.

considered specialized CPE or peripheral devices under the Act.[102]

35. To comply with its compatibility obligations, a manufacturer or service provider must assess whether it is readily achievable to install features or design equipment and services so that the equipment or service can meet the criteria of compatibility. We agree with NAD that compliance with these criteria must be mandatory.[103] We also agree with commenters who point out that as technology evolves, the guidelines and the definition of "compatibility" may need to be revised.[104] Furthermore, in recognition of the fact that these criteria were intended for equipment and CPE, we encourage service providers to consult with the disability community to identify other criteria for compatibility of services, in addition to TTY signal compatibility. Additionally, we encourage industry to develop voluntary industry-wide standards to augment the mandatory criteria we adopt today, because it will offer the industry flexibility in advancing the goals of compatibility in accordance with the requirements of section 255.

36. We require manufacturers and service providers to exercise due diligence to identify the types of peripheral devices and specialized CPE "commonly used" by people with disabilities with which their products and services should be made compatible, if it has not been readily achievable to make those products and services accessible. In the *NPRM*, we had proposed using the concepts of affordability and availability to help define the statutory term "commonly used" in section 255(d).[105] Commenters objected strongly to the use of these concepts,[106] however, as well as to our proposal to rely on state equipment distribution programs as a guide to determine "commonly used" equipment. Commenters argued that state equipment programs were limited by their own funding constraints or selection process and did not accurately represent the equipment preferred by consumers.[107] We agree. We conclude, therefore, that affordability and general market availability are insufficient, and in

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[102] The Assistive Technology Act of 1998, Pub. L. 105-394, at section 3(a)(3), defines an assistive technology device as "any item, piece of equipment, or product system, whether acquired commercially, modified, or customized, that is used to increase, maintain, or improve functionality capabilities of individuals with disabilities." 29 U.S.C. § 3003(a)(3).

[103] NAD comments at 7-8.

[104] TDI comments at 16-17.

[105] *NPRM*, 13 FCC Rcd at 20433, ¶ 87-90.

[106] *See e.g.*, IDHS comments at 2; Missouri Assistive Technology Council and Project comments at 3; NAD comments at 8; NCD comments at 19; SHHH comments at 11; UCPA comments at 8; USA comments at 12; AIM comments at 2; AFB comments at 22; Ok-ATP comments at 2 ; TDI comments at 15; TDI reply comments at 8.

[107] IDHS comments at 2; Missouri Assistive Technology Council and Project comments at 3; NCD comments at 18; TDI comments at 15; Lighthouse comments at 3; UCPA comments at 8; Trace comments at 6-7; TDI reply comments at 8. *Cf.* NAD comments at 8; SHHH comments at 12; USA comments at 11-12 (arguing that using state equipment distribution programs as guidelines could create a useful rebuttable presumption).

some cases inappropriate, criteria for determining whether a specific peripheral device or piece of specialized CPE is "commonly used" by persons with disabilities. We agree with commenters who note that peripheral devices or specialized CPE may be commonly used by members of a certain disability population, even if those devices are relatively expensive and only available through specialized outlets.[108] Further, we note that, when determining whether a particular device is commonly used by individuals with disabilities, a manufacturer or provider should look at the use of that device among persons with a particular disability. Contrary to some commenters' proposals, we decline to maintain a list of functions (*e.g.*, converting text to speech) or devices to determine what equipment is "commonly used,"[109] because what is "commonly used" by consumers may change rapidly as technology evolves.

5. Network Features, Functions, or Capabilities

37. Section 251(a)(2) of the Act requires that telecommunications carriers not install network features, functions, or capabilities that do not comply with the guidelines or standards established pursuant to section 255. We conclude that telecommunications carriers must not install service logic and databases associated with routing telecommunications services, whether residing in hardware or software, that do not comply with the accessibility requirements of these rules. This is consistent with the definition of telecommunications equipment discussed in section D.1.b., *infra*, and our tentative conclusion in the *NPRM* that section 251(a)(2) governs network configuration.

38. This is an important provision given the role of common carriers and the realities of network architecture. Without this provision, network architecture could inhibit the use of the accessible services and equipment otherwise required by these rules. In the traditional public switched telephone network (PSTN), an ordinary call may traverse a number of switches between the calling party and the called party. Prior to the mid-1960s, the service logic necessary to route calls across the network was hardwired into switching systems.[110] In the mid-1960s, stored program control (SPC) switching systems were introduced. This provided a

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[108] IDHS comments at 3; Missouri Assistive Technology Council and Project comments at 3; Motorola comments at 48; NAD comments at 8; SHHH comments at 11; TDI comments at 15.

[109] IDHS comments at 2 (list to be posted on the FCC web site); ITI comments at 24 (supporting an informational list, but opposing a mandatory list); Missouri Assistive Technology Council and Project comments at 3; NAD comments at 9 (FCC in conjunction with the Assoc. of Access Engineering Specialists), SHHH at 11, TDI at 15 (after consultation with consumer groups); USA comments at 12; Ok-ATP comments At 2; ITI reply comments at 17 (urging the Commission keep the list in order to assure impartiality); MMTA reply comments at 10-11 (holding that unless there is a list, manufacturers should be given broad latitude in deciding what is 'commonly used'); TIA reply comments at 27-29 (preferring a list to provide clear notice; and by requiring compliance with industry interoperability standards and the use of standard connectors, a list could encourage a forward looking approach to compatibility).

[110] "Intelligent Network," a tutorial sponsored by Telcordia Technologies (formerly Bellcore) available at http://www.webforum.com/in/topic01.html.

somewhat more flexible environment and allowed the creation of new services.[111] These new services included Custom Calling Services such as call waiting, call forwarding, and three way calling. Even greater flexibility was provided with the deployment of common channel signaling (CCS) or signaling system number 7 (SS7) in the mid-1970s and with the subsequent development of the Intelligent Network (IN) concept.

39. The "intelligence" (*i.e.*, the service logic) of the IN is taken out of the individual switches and placed in software and associated data bases residing in computer nodes called Service Control Points (SCPs). The SCPs are distributed throughout the network. In the IN architecture, the individual switches access the software/data bases residing in the SCPs via the SS7 network. The fundamental advantage of this architecture is that the network becomes service-independent. That is, new capabilities can be rapidly introduced into the network and services can be more easily tailored to meet the requirements of individual customers. This is because the necessary changes in service logic occur in software rather than hardware and at only a limited number of locations rather than at each switch.

40. This architecture of the PSTN is the basis for widely deployed and accepted services such as the Custom Local Area Signaling services (CLASS) and 800-number and Alternative Billing Services (ABS).[112] It is also the basis for an expanding number of other services that change the features, functionality, and capabilities of the PSTN. By using software-based logic programmed into the network and information such as the calling and called party telephone numbers, the time-of-day, information entered by the customer placing or receiving the call, and information stored in the network, calls can be handled in a host of different ways. One simple example, a service called Area Number Calling Service, is described as follows:

> This [Area Number Calling] service is useful for companies or businesses that want to advertise one telephone number but want their customer's calls routed to the nearest or most convenient business location. The SCP service logic and data (e.g., zip codes) are used to match between the calling party's telephone number and their geographic location. The call is then routed to the company or business location that is closest to or most convenient for the calling party.[113]

41. In the architecture just described, there may be multiple entities involved. In addition to the service providers, there are entities that supply the equipment used in the network. In terms of the network equipment, this may include (a) the manufacturer of the switching equipment including both hardware and software (including that necessary for basic call

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[111] *Id.*

[112] Van Bosse, John G., Signaling in Telecommunications Networks, John Wiley & Sons, New York (1998), pp. 59-60.

[113] "Intelligent Network," a tutorial sponsored by Telcordia Technologies (formerly Bellcore) available at http://www.webforum.com/in/topic10.html (downloaded June 20, 1999).

processing); (b) the manufacturer of the computer and related equipment used in the SCP; and (c) the manufacturer/supplier of the software-based service logic and databases used in the SCP. In some instances, the supplier of each of these parts may be the same entity and, at the other extremes, multiple entities may be involved. We note that the service provider may furnish its own software and databases necessary to create or maintain telecommunications services. Indeed, giving the provider the ability to create new and customized services was one of the main motivations for the migration to the service independent architecture.

42. Because service logic and databases associated with routing telecommunications services, whether residing in hardware or software, create network features, functions, and capabilities, we adopt this rule. Thus, we conclude that, in accordance with section 251(a)(2) of the Act, telecommunications carriers must not install service logic and databases (software- or hardware-based) that do not comply with the standards established pursuant to section 255. The above analysis is consistent with the definition of telecommunications equipment contained in the Act.[114] That is, both hardware and software are included in the definition of telecommunications equipment given in the Act. Our findings are also consistent with our tentative conclusion in the *NPRM* that section 251(a)(2) governs carriers' *configuration* of their network capabilities. Stated another way, providers configure their networks through the installation of service logic and databases. As we indicated in the *NPRM*, we view section 251(a)(2) to mean that the resulting configuration "should facilitate -- not thwart -- the employment of accessibility features by end users."[115]

C. READILY ACHIEVABLE

1. Definition of "Readily Achievable"

43. Section 255(b) and (c) require manufacturers of telecommunications equipment or customer premises equipment and providers of telecommunications service to design the equipment or service to be accessible to and usable by individuals with disabilities, if "readily achievable."[116] If the requirements of subsections (b) and (c) are not readily achievable, the manufacturer or service provider must ensure that the equipment or service is compatible with existing peripheral devices or specialized CPE commonly used by people with disabilities to achieve access, if "readily achievable."[117]

44. Under section 255, the term "readily achievable" has the meaning given to it in section

[114] 47 U.S.C. § 153 (45)

[115] *NPRM*, 13 FCC Rcd at 20422-23, ¶ 63.

[116] 47 U.S.C. § 255(b), (c).

[117] 47 U.S.C. § 255(d).

301(9) of the ADA.[118] The ADA provides:

> The term "readily achievable" means easily accomplishable and able to be carried out without much difficulty or expense. In determining whether an action is readily achievable, factors to be considered include --
>
> (A) the nature and cost of the action needed under [the ADA];
>
> (B) the overall financial resources of the facility or facilities involved in the action; the number of persons employed at such facility; the effect on expenses and resources, or the impact otherwise of such action upon the operation of the facility;
>
> (C) the overall financial resources of the covered entity; the overall size of the business of a covered entity with respect to the number of its employees; the number, type, and location of its facilities; and
>
> (D) the type of operation or operations of the covered entity, including the composition, structure, and functions of the workforce of such entity; the geographic separateness, administrative or fiscal relationship of the facility or facilities in question to the covered entity.[119]

45. Title III of the ADA, where the term "readily achievable" is found, requires places of public accommodation to "remove architectural barriers, and communication barriers that are structural in nature, in existing facilities, and transportation barriers in existing vehicles and rail passenger cars used by an establishment for transporting individuals . . . where such removal is readily achievable."[120] Title III also requires an entity that "can demonstrate that the removal of a barrier . . . is not readily achievable," to "make such goods, services, facilities, privileges, advantages, or accommodations available through alternative methods if such methods are readily achievable."[121]

46. The United States Department of Justice (DOJ), which is responsible for implementation and enforcement of Titles II and III of the ADA, adopted the ADA's definition of "readily achievable" in its rules, with some modifications.[122] Specifically, the

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[118] 47 U.S.C. § 255(a)(2).

[119] 42 U.S.C. § 12181(9).

[120] 42 U.S.C. § 12182(b)(2)(A)(iv).

[121] 42 U.S.C. § 12182(b)(2)(A)(v).

[122] The definition of "readily achievable," as adopted by the DOJ at 28 C.F.R. § 36.104, states:

> Readily achievable means easily accomplishable and able to be carried out without much difficulty or expense.

DOJ reordered the factors, replaced the term "covered entity" with "parent entity," and added the term "if applicable" to the beginning of the third and fourth factors.[123] While the DOJ preserved all four statutory factors in its regulation, it also added a factor allowing "legitimate safety requirements, including crime prevention measures" to be considered.[124] The DOJ provided a non-exhaustive list of sample actions that a public accommodation could take to fulfill its obligation, if readily achievable, to remove barriers, such as installing ramps, making curb cuts, installing flashing alarm lights, and widening doors.[125] The DOJ also developed a "priority list" in its regulation, urging public accommodations to take "readily achievable" actions to remove barriers in accordance with those priorities.[126]

47. We adopt the ADA's definition of "readily achievable." We agree with the DOJ that this definition is intended to ensure that a "wide range of factors be considered in determining whether an action is readily achievable."[127] Under ADA precedent, a flexible, case-by-case analysis is employed in determining whether removal of barriers is "readily achievable." We agree with commenters that individual facts and circumstances will vary, and that what is

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In determining whether an action is readily achievable factors to be considered include--

(1) The nature and cost of the action needed under this part;
(2) The overall financial resources of the site or sites involved in the action; the number of persons employed at the site; the effect on expenses and resources; legitimate safety requirements that are necessary for safe operation, including crime prevention measures; or the impact otherwise of the action upon the operation of the site;
(3) The geographic separateness, and the administrative or fiscal relationship of the site or sites in question to any parent corporation or entity;
(4) If applicable, the overall financial resources of any parent corporation or entity; the overall size of the parent corporation or entity with respect to the number of its employees; the number, type, and location of its facilities; and
(5) If applicable, the type of operation or operations of any parent corporation or entity, including the composition, structure, and functions of the workforce of the parent corporation or entity.

[123] *See* 28 C.F.R. Part 36, App. B at p. 43. The DOJ noted that its inclusion of "parent entity" was consistent with the House Judiciary Committee's description of the larger entity of which the local facility is a part. *Id., citing* H.R. Rep. No. 485, 101st Cong., 2d Sess., Pt. 3 at 40-41, 54-55 (1990). The DOJ also noted that its re-ordering of the factors and the addition of the term "if applicable" was intended to make clear that the line of inquiry concerning factors will start at the site involved in the action itself. *Id.*

[124] *Id.* We note that the propriety of considering legitimate safety requirements has been recognized in case law arising under the Rehabilitation Act of 1973. *See School Board of Nassau County v. Arline,* 480 U.S. 273 (1987).

[125] 28 C.F.R. § 36.304(b).

[126] 28 C.F.R. § 36.304(c).

[127] *See* 28 C.F.R. Part 36, App. B at page 42.

readily achievable must be determined on a case-by-case basis.[128] Our goal, therefore, is to set forth an analytical framework that will provide guidance to manufacturers and service providers as they take the steps needed to make their products and services accessible to people with disabilities.

48. The primary focus of a "readily achievable" analysis should be upon three general considerations delineated in the ADA definition, namely (1) the cost of the action; (2) the nature of the action; and (3) the overall resources available to the entity, including resources made available to the entity by a parent corporation, if applicable, depending on the type of operation and the relationship between the two entities.[129] We decline to include consideration of feasibility, expense, and practicality, as proposed in our *NPRM*.[130] After reviewing the record, we are persuaded that "readily achievable" determinations should track more closely the ADA definition that is incorporated in section 255. In our rule, we have modified the definition so that it more closely correlates with the terms used in section 255. For example, we have replaced the word "facility" throughout the definition with the terms "manufacturer" and "service provider," as appropriate. We also have inserted the terms "if applicable" before the third and fourth prongs of the definition. We believe that these modifications will provide clearer guidance to entities covered by section 255 with respect to the application of "readily achievable."[131] If our experience enforcing this statute persuades us that including some other considerations may prove beneficial, we will, at a later time, consider including them.[132]

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[128] Bell Atlantic comments at 5; CEMA comments at 5; PCIA reply comments at 7.

[129] *See* 42 U.S.C. § 12181(9).

[130] *NPRM*, 13 FCC Rcd at 20437-40, ¶ 100-106.

[131] *See* Appendix B, sections 6.3 and 7.3 for text of the final rule.

[132] Commenters expressed various views as to which factors appropriately could be considered in determining what is readily achievable. For example, many from the disability community expressed the view that market factors or cost recovery should not enter into a readily achievable analysis. *See, e.g.*, Access Living of Metropolitan Chicago comments at 4; ACB comments at 4; Access Board comments at 4-5; Blackseth comments at 1; Center for Independent Living comments at 1; Center for Disability Rights comments at 2; CEMA comments at 10; CPB/WGBH comments at 7; Garretson comments at 2; Geeslin comments at 1; Illinois Deaf and Hard of Hearing Commission comments at 4, NAD comments at 21 and 32; NCD comments at 21; President's Committee on Employment of People with Disabilities comments at 13; Rank comments at 1; CILNM comments at 4; Philips comments at 5-6. Other commenters encouraged the Commission to modify the factors to take into account the differences between architectural and transportation barrier removal, on the one hand, and the telecommunications industry, on the other hand. *See, e.g.*, Ameritech comments at 8; AT&T comments at 8; Bell South comments at 8-9; ITI comments at 31-32; Missouri Assistive Technology Council and Project comments at 4 (however, objecting to market considerations as not allowed under ADA); Motorola comments at 24-31; MMTA comments at 10; SBC comments at 12 (compliance with universal design policy may not be measured by readily achievable analysis of a finite list of features); *see also* Siemens comments at 6; TDI comments at 16; USA comments at 7-8; Vickery comments at 8; Wi-Tan comments at 4; WID comments at 5; CalPUC comments at 8 (start with the ADA but add other factors); Oklahoma Assistive Technology Project comments at 3. Finally, some commenters thought that a determination of what is readily achievable is so fact-specific that no list of factors adequately would address the

Furthermore, we agree with those parties who have argued that, in interpreting section 255, we should look to the "substantial body of judicial decisions interpreting and applying" the terms of the ADA, including the phrase "readily achievable."[133]

2. Application of Readily Achievable

a. In General

49. In implementing the requirements of section 255, we decline to adopt a "product line" framework proposed primarily by manufacturers of equipment.[134] Under this approach, a manufacturer or service provider would not need to conduct a "readily achievable" analysis for each produce or service, but instead would ensure that select products within its product lines are accessible to persons with disabilities. We conclude that section 255, by its terms, applies to the design and production of individual products and service offered by a manufacturer or service provider. Section 255(b) states that a manufacturer shall ensure that "the equipment" is designed, developed and fabricated to be accessible to individuals with disabilities, if readily achievable.[135] Likewise, section 255(c) directs providers of telecommunications service to ensure that "the service" be accessible, if readily achievable.[136] This language strongly suggests that Congress intended to make these accessibility requirements applicable to each piece of equipment and to each service, and not more generally to product lines.

50. Equally important, we believe that our interpretation of the statutory language best realizes what we consider to be two primary goals of section 255. First, the statute ensures that consumers with disabilities have access to the telecommunications products and services that are available in the general market. Thus, we concur with the comments submitted by consumers with disabilities, who oppose a product line framework because it would not permit them to utilize anything but "specialized" products.[137] Second, section 255 brings universal design and access engineering principles to the telecommunications industry, similar to developments in the architectural and transportation industries that have resulted from the

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complexity of issues that could arise in individual cases. *See, e.g.*, Bell Atlantic comments at 5; CCIA comments at 1-2.

[133] Air Touch comments at 4-5. *See also* NAD comments at 21.

[134] *See, e.g.*, Motorola comments at 6-24; CEMA comments at 8-10; TIA comments at 9-18; Lucent comments at 5, 8-10.

[135] 47 U.S.C. § 255(b).

[136] 47 U.S.C. § 255(c).

[137] AccLiv comments at 3; ACB comments at 3.

ADA and Architectural Barriers Act.[138] We view section 255 as a statute designed to change the *status quo* by requiring manufacturers and service providers to consider products and services for persons with disabilities not as a specialized field, but as part of the general market. Adoption of a product line approach would fail to ensure accessibility of all products and services, wherever it is readily achievable.

51. We recognize that there are accessibility features that can be incorporated into the design of products with very little or no difficulty or expense.[139] These features must be deployed universally. We will not identify specific features that fall into this category, because it necessarily varies given the individual circumstances. Manufacturers and service providers must make their own determinations based on the factors in the readily achievable definition. Thus, manufacturers and service providers cannot decline to incorporate modest features that will enhance accessibility simply because some other product or service with the feature may be available. We expect that, over time, more and more features will be incorporated into all products in this manner, and that features that today may not be readily achievable soon will become routine and universally adopted.

52. With respect to those features or actions that are not readily achievable to be deployed universally, but are readily achievable to be incorporated into some products and services, manufacturers and service providers have the flexibility to distribute those features across product or service lines as long as they do all that is readily achievable. In addition, we expressly encourage manufacturers and service providers to work closely with the disability community to ensure that under-represented disability groups, and multiple disabilities (such as deaf-blindness), are not ignored.

53. Finally, in those instances where accessibility under subsections (b) or (c) of section 255 is not readily achievable, service providers and manufacturers are required to comply with subsection (d), which states that they must ensure that their equipment or services are compatible with existing specialized CPE or peripheral devices commonly used by persons with disabilities to achieve access, if readily achievable.

54. We believe this framework will provide manufacturers and service providers a viable means for compliance with section 255, while promoting accessibility to the maximum extent possible. We expect that different companies, faced with their unique circumstances, may well come to different conclusions about deployment of accessibility features. We believe that is a desirable outcome that will maximize the range and depth of accessible products and

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[138] Architectural Barriers Act of 1968, 42 U.S.C. § 4151 *et. seq.* *See also* PL 105-394, section 3(a)(17), November 13, 1998 (Assistive Technology Act of 1998), which defines "universal design" as "a concept or philosophy for designing products and services that are usable by people with the widest possible range of functional capabilities, which include products and services that are directly usable (without requiring assistive technologies), and products and services that are made usable with assistive technologies." 29 U.S.C. § 3003(a)(17).

[139] For some examples of accessible design features, *see EZ Access Strategies for Cross-Disability Access to Kiosks, Telephones and VCRs,* available at the Trace web site (http://www.trace.wisc.edu).

services available to customers and will capitalize on the positive forces of competition.

b. Cost of the Action Needed

55. In determining whether an action is "readily achievable," one consideration is the "cost" of the action.[140] In the *NPRM,* we asked a number of questions regarding how to determine cost.[141] After consideration of the record, we conclude that "cost," for purposes of the "readily achievable" evaluation, is the incremental amount that a manufacturer or service provider expends to design, develop, or fabricate a product or service to ensure that it is accessible. We recognize that it may be difficult at times for a manufacturer or service provider to identify the incremental cost of making its products or services accessible. For the sake of simplicity, however, this analysis should begin by calculating, to the extent possible, the incremental cost of facilities, plant, labor, software, hardware or other concrete actions necessary to design the product or service to enhance or provide accessibility. For example, a manufacturer of wireless handsets might calculate the cost of designing and installing a nub on the "5" key of a phone's keypad that would provide a tactile cue for persons with vision disabilities. The incremental cost of adding keypads with a nub would be the total cost of producing the phone with keypads with a nub, less the total cost of producing the phone without keypads with a nub.

56. Although we tentatively concluded in the *NPRM* that it would be appropriate to consider net costs, taking into account such factors as the potential for recovery of expenses from consumers through increased sales or higher product prices, we now reject that approach for several reasons.[142] We believe that an assessment of market factors, such as the ability of a service provider or manufacturer to recover its costs through price changes, would involve speculation. Moreover, not considering market factors is consistent with ADA precedent, and we are not convinced that there are any factors specific to telecommunications that compel us to adopt an interpretation of costs different from that under the ADA. Indeed, the Access Board has argued that because "readily achievable" is a term rooted in the ADA, we should not stray from the well-established interpretation given to "costs" under prior disability rights statutes, particularly when it could have adverse consequences for the disability community.[143] We also are persuaded that introducing cost recovery or market considerations into the meaning of "cost" could defeat one of the primary purposes of section 255 -- enhancing access to telecommunications equipment and service for a population whose needs have not

[140] 42 U.S.C. § 12181(9)(A).

[141] *NPRM*, 13 FCC Rcd at 20441-47, ¶ 111-121.

[142] *Id.*

[143] Access Board comments at 4.

been addressed by the market alone.[144] For all these reasons, we conclude that "costs" means incremental costs to design, develop or fabricate accessible products or services.

57. While we have concluded that we will not consider market factors in determining what is readily achievable, we do not rule out the ability of manufacturers and service providers to take these market factors into account when making the decisions discussed in section C.2., *supra*, regarding deployment of more significant readily achievable accessibility features throughout its products.

58. We will permit manufacturers and service providers to consider the cost of disability access actions for a product or service in conjunction with the cost of other actions taken by them to comply with these rules during a fiscal period, as proposed by a number of commenters.[145] This is consistent with the DOJ's approach in its ADA regulation.[146] We agree with DOJ and various commenters that, in some circumstances, it may be appropriate to consider the cost of other accessibility actions as a factor in determining whether a measure is readily achievable. Therefore, manufacturers and service providers may take into account the cumulative cost[147] of all accessibility actions over a specific fiscal period in determining whether an action is "readily achievable." We underscore, however, that "cumulative costs" cannot be the only factor used by a manufacturer or service provider to determine whether a measure is "readily achievable." In particular, the ability to take into account cumulative costs shall not permit a manufacturer or service provider to predetermine caps or quotas on its total spending for section 255 compliance for a given fiscal period. The fact that a manufacturer or service provider already may have spent a certain amount of resources to install an accessibility feature in one product does not terminate its obligation to determine whether it is readily achievable also to install the feature into other products. In short, cumulative access expenditures is simply one factor that can be taken into account in case-by-case determinations.

59. We anticipate that, for some accessibility features, the cumulative cost of including a feature in all products may be well within the bounds of what is readily achievable. Cumulative costs may become a limiting factor, however, when the cost of a certain feature is more significant but still readily achievable, or the manufacturer already has expended considerable resources in installing the same or other features in other products. The "readily achievable" evaluation always must be made in light of the overall resources available to the

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[144] *See* Blackseth comments at 1; Geeslin comments at 1; Ireland comments at 11; Kailes comments at 2; LDA comments at 2; Missouri Assistive Technology Council and Project comments at 4; Sergeant comments at 2; USA comments at 10; Wilson comments at 1; Meecham comments at 1.

[145] *See, e.g.*, Motorola comments at 37.

[146] *See* 28 C.F.R. Part 36, App. B at page 45.

[147] The term "cumulative cost" would include both the incremental cost of the accessibility feature for the specific product or service and the total costs of the entity's section 255 compliance efforts during the same fiscal period.

manufacturer or service provider. Where a particular accessibility measure is not "readily achievable," a manufacturer or service provider then must consider other alternative, readily-achievable measures to make products accessible.

60. Finally, a number of commenters have suggested that the impact of adding an accessibility feature on the timing of a product or service rollout should be taken into consideration during "readily achievable" assessments.[148] A manufacturer or service provider may consider whether inclusion of an accessibility feature significantly will delay production or release of a product, and therefore increase production costs, provided that the manufacturer or service provider demonstrates that it did in fact consider accessibility at the design stage.[149] Of course, the mere fact that inclusion of a feature will add time and cost to production will not, alone, render the measure not readily achievable.

c. Nature of the Action Needed

61. Another consideration in the "readily achievable" analysis is the nature of the action needed to make equipment or service accessible to persons with disabilities. The Access Board stated in the advisory appendix to its guidelines that "the nature of the action or solution involves how easy it is to accomplish, including the availability of technology or expertise, and the ability to incorporate the solution into the production process."[150] While commenters generally have not framed their comments in terms of "nature of the action," many address the concepts of "fundamental alterations" and "technical feasibility," which we believe fall within the ambit of "nature of the action."

62. The Access Board found that the "fundamental alteration" concept derives from the "undue burden" test under the ADA and, since "undue burden" is a higher standard than "readily achievable," that the concept of fundamental alteration is implicit in the readily achievable analysis.[151] Since a covered entity must, hypothetically, demonstrate a much more onerous burden in order to be relieved of any obligations under the "undue burden" standard of the ADA, it follows that any actions that constitute an undue burden, including fundamental alterations, are also not "readily achievable." We agree, and therefore believe that a manufacturer or service provider is not required to install an accessibility feature if it can demonstrate that the feature fundamentally would alter the product. Specifically, we agree with several commenters that manufacturers and service providers are not required to incorporate accessibility features within a product that fundamentally alters the product in such a way as to reduce substantially the functionality of the product, to render some features

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[148] *See, e.g.,* Phillips comments at 7; Lucent comments at 5; CEMA comments at 14.

[149] *See* letter of Karen Peltz Strauss, NAD, et al. to Magalie Roman Salas, FCC, dated January 20, 1999 (NAD Ex Parte) at 6.

[150] *Access Board Order* at 63 Fed. Reg. 5633 (1998).

[151] *Access Board Order* at 63 Fed. Reg. 5614 (1998).

inoperable, to impede substantially or deter use of the product by individuals without the specific disability the feature is designed to address, or to alter substantially and materially the shape, size or weight of the product.[152] We caution parties that the "fundamental alteration" doctrine is a high standard and that the burden of proof rests with the party claiming the defense.[153] In this connection, we note that all accessibility enhancements in one sense require an alteration to the design of a product or service. In order to be a fundamental alteration, however, the feature must alter the product substantially or materially.

63. In the *NPRM*, we tentatively concluded that technical infeasibility should be one factor in determining whether an accessibility feature is readily achievable. We now conclude that, when assessing the "nature of the action" in a readily achievable analysis, manufacturers and service providers are not required to incorporate accessibility features that are technically infeasible, subject to several limitations. As an initial matter, while technical infeasibility is a consideration, we agree with commenters that it does not exist merely because a particular feature has not yet been implemented by any other manufacturer or service provider.[154] We also caution that technical infeasibility should not be confused with cost factors. In other words, a particular feature cannot be characterized as technically infeasible simply because it would be costly to implement.

64. We agree with several commenters, however, that in some rare instances, "technical infeasibility" may result from legal or regulatory constraints.[155] We also agree with several commenters that technical infeasibility encompasses not only a product's technological limitations, but also its physical limitations. We note, however, that manufacturers and service providers should not make conclusions about technical infeasibility within the "four corners" of a product's current design.[156] Section 255 requires a manufacturer or service provider to consider physical modifications or alterations to the existing design of a product. Finally, we agree with commenters that manufacturers and service providers cannot make bald assertions of technical infeasibility. Any engineering or legal conclusions that implementation of a feature is technically infeasible should be substantiated by empirical evidence or

[152] TIA comments at 49-50; SHHH reply comments at 3; TDI reply comments at 13; TIA reply comments at 4.

[153] *See generally Southeastern Community College v. Davis*, 442 U.S. 397 (1979); *Alexander v. Choate* 469 U.S. 287 (1985).

[154] *See, e.g.*, SHHH comments at 14.

[155] BellSouth comments at 9. For example, standards under Part 68 of our rules designed to prevent harm to the network may render a proposed feature infeasible, if the proposed feature would need to exceed Part 68 signal strength limitations. *See also* CTIA comments at 7 (bundling restrictions for wireline services may affect feasibility).

[156] AFB comments at 23.

documentation.[157]

d. Resources of the Covered Entity

65. Once the cost and nature of the action needed have been determined, it is necessary to ascertain the overall resources of the manufacturer or service provider. We conclude that we should follow the two-step analysis of a covered entity's resources set forth by the DOJ in its ADA regulation.[158] Accordingly, the resources of the "covered entity" (i.e., the manufacturer or service provider) first are examined.[159] The resources of any parent corporation or comparable entity with a legal relationship with the manufacturer or service provider would be examined and taken into account, unless the covered entity or parent can demonstrate why any legal or other constraints prevent the parent's resources from being available to the covered entity.[160]

66. Commenters disagreed as to whether the resources of a parent or other entity should ever be included in the evaluation of the "overall financial resources of the covered entity." Although this phrase from the ADA definition may be susceptible to different interpretations, we conclude that the better construction of the statute is that, for purposes of the readily achievable analysis, the covered entity must take into account any and all financial resources available to it, including resources from third parties. We believe this interpretation is consistent with the text of the statute, as well as the purposes of section 255. The ADA definition speaks broadly about the covered entity's "overall financial resources" without limiting those resources to those derived from the entity's own product sales or investment revenues. The statute's broad phrasing thus supports our conclusion that all available resources should be included, regardless of their source. Where a covered entity benefits from resources of either an affiliated entity, or a third party with whom it has some legally binding relationship, it would be anomalous to determine that those resources should be expressly excluded in determining whether an action is readily achievable within the meaning of section 255. We do not believe that Congress intended to pretend that such resources do not exist. Significantly, our reading is consistent with the DOJ definition of readily achievable, which substitutes the term "parent entity" for covered entity when referring to the resources that

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[157] AFB comments at 24; Bell South comments at 9; Campaign for Telecommunications Access comments at 14; CTIA comments at 7-8; NAD comments at 4, 21-22; NCD comments at 24; Nortel comments at 8; SHHH comments at 14 (asserting that it is not sufficient to demonstrate that others have not found a feasible solution); UCPA comments at 11.

[158] *See* 28 C.F.R. Part 36, App. B at page 43.

[159] *See* 28 C.F.R. Part 36, App B at p. 44: ". . .the line of inquiry concerning factors will start at the site involved in the action itself. . . . the overall resources, size, and operations of the parent corporation or entity should be considered to the extent appropriate in light of the geographic separateness, and the administrative or fiscal relationship of the site or sites in question to any parent corporation or entity."

[160] In this regard, the geographical separateness and the administrative or fiscal relationship of the entities would be considered. *See, e.g.*, SBC comments at 11-12; Bell Atlantic comments at 6-7.

should be examined.[161]

67. In reaching our conclusion, we reject Lucent's argument that "inclusion of corporate resources does not yield competitively neutral outcomes." [162] Just the contrary is true. If we were to narrowly circumscribe our assessment of resources by ignoring the fact that some covered entities may have resources available to them from a third party, our readily achievable assessment would not be competitively neutral. Rather, those companies that are benefiting from external resources shielded from readily achievable assessments would have an unfair advantage over companies that do not have access to such resources. We do not believe that Congress intended such a result. Moreover, if we ignored financial resources from third parties, then companies would have an incentive to spin off their operations into smaller subsidiaries in order to lessen the impact of section 255. We decline to adopt an interpretation that could needlessly undermine the statute in that manner.

68. We conclude that in evaluating its "overall resources", the covered entity must take into account financial resources of any kind that may be available from a third party. This would include any capital or other financial assets, recourse to guarantees that may be used for the covered entity's debt financing or to otherwise assist its business, resources in the form of labor or services, or any other items that would affect the "overall financial resources" available to the manufacturer or service provider. Resources of another entity shall be taken into account regardless of whether that other entity is a telecommunications manufacturer or service provider.

69. In some cases, consideration of the resources of another entity may not be applicable because of the nature of the legal relationship between the parties, or because no resources in fact are available to the manufacturer or service provider from the outside entity. For example, as Bell Atlantic notes, our affiliate transaction rules or similar state requirements may limit the ability of an affiliate providing non-regulated services to draw upon the resources of its regulated parent.[163]

70. In the *NPRM*, we proposed establishing a "rebuttable presumption" that reasonably-available resources are those of the covered entity legally responsible for the equipment or service that is subject to the requirements of section 255.[164] Commenters were divided on the merits of this proposal.[165] After reviewing the record, we have concluded that the better

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[161] *See* 28 C.F. R. Part 36, App. B. at p. 43.

[162] Lucent Comments at 9.

[163] Bell Atlantic comments at 7; CEMA reply comments at 4-5; USTA reply comments at 12.

[164] *NPRM*, 13 FCC Rcd at 20440-41, ¶ 109.

[165] NAD comments at 24; SHHH comments at 14; Lighthouse comments at 3; TDI comments at 18-19; COR reply comments at 9; NCD reply comments at 5; GTE comments at 9; SBC comments at 11 (supporting proposal). *Cf.* USA comments at 11; USA reply comments at 12; TIA comments at 50-51; ITI comments at 28; ITI reply

approach is to evaluate the resources of any parent company, or comparable entity with legal obligations to the covered entity, but permit any covered entity (or parent company) to demonstrate why legal or other constraints prevent those resources from being available to the covered entity. We note that the evidence required to make such a showing resides with the covered entity and its parent, and thus it is reasonable to put the burden on the covered entity, or parent, to show why such resources are not available. A deficiency with the presumption proposed in the *NPRM* is that it may have had the unintended effect of putting the burden on the consumer to prove that a parent's resources were available to the subsidiary, a burden that would be difficult for any consumer to satisfy because relevant evidence would be almost exclusively in the possession of the parent or covered entity.

3. Timing of Readily Achievable Assessments

71. The readily achievable obligation imposed by section 255 is both prospective and continuing.[166] While it is appropriate to consider the time needed to incorporate accessibility solutions into new and upgraded products, technological advances that present opportunities for readily achievable accessibility enhancements can occur at any time in a product cycle.[167] A manufacturer's or service provider's obligation to review the accessibility of a product or service, and add accessibility features where readily achievable, is not limited to the initial design stage of a product. We conclude that manufacturers and service providers, at a minimum, must assess whether it is readily achievable to install any accessibility features in a specific product whenever a natural opportunity to review the design of a service or product arises. If it is readily achievable to include an accessibility feature during one of these natural opportunities, the manufacturer or service provider must install the feature. Natural opportunities could include, for example, the redesign of a product model, upgrades of services, significant rebundling or unbundling of product and service packages, or any other modifications to a product or service that require the manufacturer or service provider to substantially re-design the product or service.

72. Cosmetic changes to a product or service may not trigger a manufacturer's reassessment of a product's accessibility.[168] Thus, simply changing the color, make, model name or designation of a product, or the marketing materials associated with the product, without changing the product's actual design, usually will be considered a "cosmetic" change.

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comments at 21 (objecting to proposal).

[166] *Cf.* 28 C.F.R. Part 36, App. B at p. 44: "The obligation to engage in readily achievable barrier removal is a continuing one. Over time, barrier removal that initially was not readily achievable may later be required because of changed circumstances."

[167] By a product "cycle," we generally mean the life of the product from the time the product is first designed to the time it is distributed to consumers, and we do not intend to include the expected life of the product, once purchased by the consumer, as within the product "cycle."

[168] We caution, however, that some "cosmetic" changes, such as changes to the font or characters printed on a product, could have an adverse impact on accessibility.

In such instances, however, manufacturers or service providers also should ensure that any new documentation or manuals included with the product are accessible to and usable by people with disabilities, if readily achievable. We also note that, at times, the "rebundling" of a CPE or service package may amount to a cosmetic change, if the rebundling is very short-lived (*e.g.*, as part of a promotional campaign) and does not impact the operation, or interoperability, of the individual components of the bundle.

73. Finally, we emphasize that section 255 does not require manufacturers of equipment to recall or retrofit equipment already in their inventories or in the field. The mere fact that a product or service has left the "drawing board", however, does not terminate the manufacturer or service provider's section 255 obligations with respect to that product or service.

4. Documentation of Readily Achievable Assessments

74. We believe that the framework for readily achievable assessments we have outlined in this Order will ensure that the broadest range of products will become accessible to the broadest number of users. Over time, design principles and features that were considered "significant" may become modest due to technological advances and the maturing of the access engineering field. We anticipate, furthermore, that manufacturers and service providers will recognize that making modest alterations to products will not require intensive and cumbersome accessibility design reviews.[169] As proposed in the *NPRM*, we conclude that we should not at this time delineate specific documentation requirements for "readily achievable" analyses. We fully expect, however, that manufacturers and service providers, in the ordinary course of business, will maintain records of their accessibility efforts that can be presented to the Commission to demonstrate compliance with section 255 in the event consumers with disabilities file complaints.

D. SERVICES AND EQUIPMENT COVERED BY THE RULES

75. Section 255 applies to any "manufacturer of telecommunications equipment or customer premises equipment" and to any "provider of telecommunications service."[170] As discussed below, we conclude that, in so far as these phrases are broadly grounded in the Communications Act, our sole task here is to explain their application in the context of section 255. We will, however, as explained below, assert our ancillary jurisdiction to cover two non-telecommunications services.

1. Telecommunications and Telecommunications Service

76. Section 255(c) requires that any "provider of telecommunications service shall ensure that the service is accessible to and usable by individuals with disabilities, if readily

[169] *See* NAD Ex Parte in WTB Docket 96-198 at 4.

[170] 47 U.S.C. § 255.